

**REMARKS**

Claims 4-9, 14, and 17-23 had been pending, with claims 1-3, 10-13, 15-16 canceled, and claims 4 and 14 withdrawn.<sup>1</sup> In the present amendment, Applicants cancel claims 4, 5, 7, 14, 17, and 18 without prejudice or disclaimer of the subject matter thereof. Applicants reserve the right to pursue the subject matter of those claims in this or a related application in the future.

Applicants also amend claims 6, 8, 9, and 20-22 as described in detail below. Therefore, upon entry of the present amendment, claims 6, 8, 9, and 19-23 are pending and under consideration.

In the present amendment, Applicants amend claims 6, 8, 9, and 20-22, as follows. First, Applicants acknowledge with appreciation the Office's statement that claims 8, 19, and 21 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." Action at page 6. Solely to expedite prosecution, without acquiescing to the Office's rejections and arguments, and without prejudice or disclaimer of the subject matter, Applicants cancel claim 5 and amend claim 8 to independent form reciting all of the limitations of claim 5. Applicants amend, without prejudice or disclaimer, claim 6 to depend from claim 8, instead of claim 5, and to recite "stem cell, stem cell tissue, or stem cell nucleus." Claims 9, 20, and 21 have also been amended, without prejudice or disclaimer, to depend from claim 8, instead of claim 5. Applicants amend, without prejudice or disclaimer, claim 22 to recite "[a] method of identifying a stem cell, stem cell tissue, or stem cell nucleus" and to delete

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<sup>1</sup> Applicants note that the Office Action Summary of the present Action indicates that claims 4-9, 14, and 17-23, are subject to a restriction and/or election requirement. However, in a telephone conference with the Examiner on January 9, 2006, the Examiner stated that that restriction requirement is not a new requirement, but rather a reminder that those claims had previously been subjected to a restriction requirement. Although the Examiner stated that no response was necessary, Applicants nevertheless reaffirm the previous election of the invention of the claims

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language referring to kidney, placenta, brain, and sperm. In addition, following the Office's suggestion (*see* Action at page 2), Applicants further amend claim 22 to recite "to permit identification of the stem cell, stem cell tissue, or stem cell nucleus as one of the known types of stem cell, stem cell tissue, or stem cell nucleus." Thus, these amendments add no new matter. Furthermore, Applicants assert that the amendments raise no new issues and merely place the claims in better condition for allowance.

**I. Rejection of Claims 22 and 23 Under 35 U.S.C. § 112, paragraph 2**

The Office newly rejected claims 22 and 23 under 35 U.S.C. § 112, paragraph 2, as allegedly indefinite because, according to the Office, "it is unclear if a match to a DNA methylation pattern would result in the identification of all of the different listed cell types or if only one listed cell type will be identified." Action at page 2. Without acquiescing to the Office's rejection and arguments, yet following the Office's suggestion, Applicants have amended claim 22 to recite "to permit identification of the stem cell, stem cell tissue, or stem cell nucleus as one of the known types of stem cell, stem cell tissue, or stem cell nucleus." Claim 23 depends from claim 22. Applicants assert that claims 22 and 23 are, therefore, clear and definite, and respectfully request reconsideration and withdrawal of the rejection of those claims under 35 U.S. § 112, paragraph 2.

**II. Rejection of Claims 5-7, 9, 17, 18, 20, 22, and 23 Under 35 U.S.C. § 103(a)**

The Office maintained or newly rejected claims 5-7, 9, 17, 18, 20, 22, and 23 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Olek et al. (U.S. Patent No. 6,214,556)

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of Group I (*see* Applicants' Amendment and Response filed November 6, 2003, at page 5) and acknowledge the withdrawal of claims 4 and 14.

in view of Ohgane et al., Dev. Gen. 22:132-140 (1998). Applicants respectfully traverse the rejection.

Solely to expedite prosecution, and without acquiescing to the Office's arguments, Applicants canceled claims 5, 7, 17, and 18 without prejudice or disclaimer. Accordingly, the rejection is moot as to those claims. Claims 6, 9, and 20 have each been amended without prejudice or disclaimer to depend from amended independent claim 8, which the Office indicated is allowable. Claim 6 has been further amended to recite "stem cell, stem cell tissue, or stem cell nucleus." Since the Office has acknowledged the patentability of claim 8 over Olek et al. in view of Ohgane et al., claims 6, 9, and 20, which now all depend from claim 8, are likewise patentable over Olek et al. in view of Ohgane et al. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 6, 9, and 20 under 35 U.S.C. § 103(a).

Next, the Office states that "[r]egarding claims 22, 20 and 23, Ohgane et al. teach obtaining DNA methylation patterns for the kidney or placenta and generating DNA methylation patterns with RLGS profiles." Action at page 5. Moreover, the Office contends that "Olek et al. teaches a generic method of identifying cell types through DNA methylation patterns [and that] Ohgane et al. provides a DNA methylation pattern." *Id.* Thus, according to the Office, one skilled in the art "would be motivated to take the DNA methylation pattern from Ohgane et al. and incorporate it into Olek et al.'s method in order to identify placental or kidney tissue." *Id.* (citations omitted).

Applicants respectfully traverse the rejection. Without acquiescing to the Office's rejection and arguments, and without prejudice or disclaimer, claim 22 has been amended to recite, similar to claim 8, "identifying a stem cell, stem cell tissue, or stem cell nucleus."

Applicants further amended Claim 22 to delete language referring to kidney, placenta, brain, and sperm. Neither Olek et al. nor Ohgane et al. teach or suggest

[a] method of identifying a stem cell, stem cell tissue, or stem cell nucleus, comprising: obtaining a DNA methylation pattern for the stem cell, stem cell tissue, or stem cell nucleus . . . ; obtaining a cell-, tissue-, or nucleus-specific DNA methylation pattern for one or more known types of cell, tissue, or nucleus; wherein the one or more known types of cell, tissue, or nucleus is selected from undifferentiated embryonic stem cell, differentiated embryonic stem cell, undifferentiated trophoblast stem cell, and differentiated trophoblast stem cell; and, comparing the DNA methylation pattern for the stem cell, stem cell tissue, or stem cell nucleus with the cell-, tissue-, or nucleus-specific DNA methylation pattern of the known cell, tissue, or nucleus to permit identification of the stem cell, stem cell tissue, or stem cell nucleus as one of the known types . . . ; wherein a match

identifies the stem cell, stem cell tissue, or stem cell nucleus.

Since the combined disclosures of Olek et al. and Ohgane et al. do not teach or suggest all of the claim limitations, Applicants assert that claim 22, as well as claim 23, which depends from claim 22, are not obvious in view of those disclosures. Claim 20 was discussed above. Claim 20 depends from claim 8; thus, the rejection is moot with respect to claim 20.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 20, 22, and 23 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Olek et al. in view of Ohgane et al.

### **III. Objection to Claims 8, 19, and 21**

The Office objected to claims 8, 19, and 21 as being dependent upon a rejected base claim. The Office stated that the claims “would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.” Action at page 6. Applicants have canceled claim 5 without prejudice or disclaimer, and have amended claim 8 without prejudice or disclaimer to independent form reciting all of the limitations of claim 5.

Claims 19 and 21 depend from claim 8. Therefore, Applicants respectfully request withdrawal of the objection to claims 8, 19, and 21 and assert that the claims are in condition for allowance.

**CONCLUSION**

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of the application and the timely issuance of a Notice of Allowance. If the Examiner does not consider the claims allowable, the undersigned requests that, prior to taking action, the Examiner call her at (650) 849-6749 to set up an interview.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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GARRETT & DUNNER, L.L.P.

Dated: February 15, 2006

By: \_\_\_\_\_



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